Quercetin dihydrate

**Cat. No.:** HY-N0146  
**CAS No.:** 6151-25-3  
**Molecular Formula:** C_{15}H_{14}O_{9}  
**Molecular Weight:** 338.27  
**Target:** PI3K; Apoptosis  
**Pathway:** PI3K/Akt/mTOR; Apoptosis  
**Storage:**  
- Powder: -20°C, 3 years; 4°C, 2 years  
- In solvent: -80°C, 6 months; -20°C, 1 month

### SOLVENT & SOLUBILITY

#### In Vitro

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Mass (mg)</th>
<th>Solvent Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO: 100 mg/mL</td>
<td>2.9562 mL</td>
<td>1 mM</td>
</tr>
<tr>
<td></td>
<td>14.7811 mL</td>
<td>5 mM</td>
</tr>
<tr>
<td></td>
<td>29.5622 mL</td>
<td>10 mM</td>
</tr>
<tr>
<td>H2O: &lt; 0.1 mg/mL</td>
<td>0.2956 mL</td>
<td>10 mM</td>
</tr>
</tbody>
</table>

**Preparation of Stock Solutions:**

- 1 mg: 2.9562 mL
- 5 mg: 14.7811 mL
- 10 mg: 29.5622 mL

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
   Solubility: ≥ 2.5 mg/mL (7.39 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: ≥ 2.5 mg/mL (7.39 mM); Clear solution

### BIOLOGICAL ACTIVITY

**Description:** Quercetin dihydrate, a natural flavonoid, is a stimulator of recombinant SIRT1 and a PI3K inhibitor with IC\textsubscript{50}s of 2.4 μM, 3.0 μM and 5.4 μM for PI3K γ, PI3K δ and PI3K β, respectively\textsuperscript{[1]}.  

**IC\textsubscript{50} & Target:**  
- PI3Kγ: 2.4 μM (IC\textsubscript{50})  
- PI3Kβ: 5.4 μM (IC\textsubscript{50})  
- PI3Kδ: 3.0 μM (IC\textsubscript{50})  

**In Vitro:** Quercetin dihydrate is a type of plant-based chemical, or phytochemical, used as an ingredient in supplements, beverages or foods. In several studies, it may have anti-inflammatory and antioxidant properties, and it is being...
investigated for a wide range of potential health benefits\textsuperscript{[1]}. Quercetin dihydrate is a PI3K inhibitor with IC\textsubscript{50}s of 2.4-5.4 $\mu$M. Quercetin dihydrate strongly abrogates PI3K and Src kinases, mildly inhibits Akt1/2, and slightly affected PKC, p38 and ERK1/2\textsuperscript{[1]}. Quercetin dihydrate inhibits TNF-induced LDH% release, EC-dependent neutrophils adhesion to bovine pulmonary artery endothelial cells (BPAEC), and BPAEC DNA synthesis and proliferation\textsuperscript{[2]}. 

\textbf{CUSTOMER VALIDATION}

- Exp Cell Res. 2020 May 3;112054.

See more customer validations on \textsuperscript{www.MedChemExpress.com}

\textbf{REFERENCES}

